

BMW · POWERTRAIN

P1348

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1348 · BMW

Misfire During Start Cylinder 4

P1348 on BMW vehicles means the engine computer detected a misfire specifically on cylinder 4 during the engine start phase, before the engine reaches normal operating speed. The misfire is identified by crankshaft speed fluctuations immediately after cranking, which the DME (Digital Motor Electronics) compares against expected values for each cylinder.

SYSTEM

Powertrain

CODE TYPE

BMW specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system
and misfire

Symptoms you may notice

- Rough or stumbling idle immediately after a cold start, often smoothing out once the engine warms up
- A flashing or steady check engine light, sometimes accompanied by reduced engine power
- Noticeable vibration or shaking from the engine bay during the first few seconds of running
- Hard starting or extended cranking before the engine fires
- Often no symptoms besides the warning light, especially if the misfire is intermittent

Common causes, most likely first

- 1 Worn or fouled spark plug on cylinder 4, especially common on turbocharged BMW engines with direct injection
- 2 Faulty ignition coil on cylinder 4, which often fails intermittently when cold
- 3 Leaking or clogged fuel injector on cylinder 4, causing an incorrect air-fuel mixture during start
- 4 Carbon buildup on intake valves, a known issue on BMW direct-injection engines that affects cold-start mixture quality
- 5 Vacuum leak at the intake manifold gasket near cylinder 4, leaning out the mixture during start
- 6 Low compression on cylinder 4 due to worn piston rings or valve sealing problems
- 7 Faulty engine coolant temperature sensor causing an incorrect cold-start enrichment strategy



How to diagnose and fix it

- 1 Scan all BMW-specific fault memory with a capable diagnostic tool and record freeze-frame data for P1348
- 2 Swap the ignition coil from cylinder 4 with a neighbouring cylinder and recheck whether the misfire follows the coil
- 3 Remove and inspect the spark plug on cylinder 4 for fouling, wear, or incorrect gap, and replace if needed
- 4 Perform a cold-start fuel trim and injector balance test to check for a leaking or clogged injector on cylinder 4
- 5 Check intake manifold gaskets and vacuum lines near cylinder 4 for leaks using a smoke tester
- 6 Run a compression test and, if low, a cylinder leak-down test on cylinder 4 to rule out mechanical faults
- 7 If carbon buildup is suspected, perform a walnut-blast intake valve cleaning procedure as BMW specifies

Cold-start misfires that hide when warm

- A P1348 that only appears on the first start of the day and clears after warm-up is very often a failing ignition coil or a spark plug that breaks down under cold, rich conditions rather than a mechanical engine fault.
- BMW direct-injection engines are prone to carbon accumulation on intake valves, and this can cause a start-specific misfire on one cylinder without setting a misfire code once the engine is running normally.
- Technicians sometimes replace all coils and plugs when only cylinder 4 is flagged, but swapping the coil first is a cheap way to confirm whether the fault follows the component or stays with the cylinder.
- A weak battery or slow cranking can cause the DME to misjudge crankshaft speed fluctuations and set a false P1348, so check battery voltage and cranking speed before condemning ignition parts.
- Fuel injector problems on BMW direct-injection engines can be intermittent and temperature-dependent, so a cold-start injector balance test is more revealing than a static resistance check.

Can I keep driving with P1348?

You can usually drive the car short distances to a workshop, but avoid hard acceleration and long trips until the misfire is diagnosed, because unburned fuel can overheat the catalytic converter. If the check engine light flashes or the engine runs very rough, stop driving and arrange a tow.

Tools that help

- BMW-specific OBD-II scan tool with live data and freeze-frame capability
- Spark plug socket and torque wrench
- Ignition coil puller or trim removal tool
- Compression tester
- Smoke machine for intake leak testing
- Multimeter for checking coil and injector circuits



Reading P1348

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (BMW): its meaning depends on the make.
- 3** Ignition system and misfire.
- 48** The exact fault within that area.

Often seen with

P1345 Ignition Coil Output Stage 3 Short To Ground · **P1346** Ignition Coil Power Output State 3 Short To B+ · **P1347** Bank 2 Crankshaft Camshaft Position Sensor Signal Out Of Seq · **P1345** VVT Sensor Circuit Malfunction Bank 1 · **P1346** VVT Sensor Range Performance Problem Bank 1 · **P1345** No CMP or SGC Signal · **P1345** No SGC Signal 1.6L · **P1345** Camshaft to Crankshaft Position Correlation Fault · **P1346** Intake Camshaft Position (CMP) Sensor System Performance · **P1345** CKP/CMP Correlation · **P1346** Intake Camshaft Position (CMP) Sensor System Performance · **P1345** Misfire Cylinder 2 With Fuel Cut-off · **P1346** Misfire During Start Cylinder 3 · **P1347** Misfire Cylinder 3 With Fuel Cut-off · **P0300** Random/Multiple Cylinder Misfire Detected · **P0304** Cylinder 4 Misfire Detected

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1348/>

